Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (cancelled)

Claim 6 (currently amended): A cell culture comprising:

a human neural precursor cell line, said cell line comprising ~~a~~ cells containing a recombinant DNA construct comprising a receptor ligand-regulated *c-myc* gene, wherein said cell line ~~at least about 20% of the cell line~~ resists differentiation in media containing a mitogen and is capable of differentiating into neurons upon withdrawal of mitogen.

Claims 7-22 (canceled)

Claim 23 (currently amended): A cell culture comprising mammalian neural precursor cells capable of differentiating into neurons and glia,

wherein the mammalian neural precursor cells comprise a recombinant DNA construct comprising a receptor ligand-regulated *c-myc* gene, and

wherein said neural precursor cells resist differentiation in media containing a mitogen and ~~at least about 20% of said mammalian neural precursor cells~~ are capable of differentiating into neurons upon withdrawal of mitogen.

Claim 24 (previously presented): The cell culture of claim 23, wherein the mammalian neural precursor cells are derived from a human.

Claim 25 (previously presented): The cell culture of claim 23, wherein the mammalian neural precursor cells are derived from pluripotent embryonic stem cells.

Claim 26-30 (cancelled)

Claim 31 (currently amended): A cell culture comprising a cell line of mammalian neural precursor cells, produced by:

(a) culturing the neural precursor cells in a serum-free medium and in the presence of a first mitogen, wherein said first mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

(b) introducing a *c-myc* construct into the cells, wherein the *c-myc* construct includes ~~at least a portion of~~ a *c-myc* DNA fused with DNA encoding ~~at least a portion of~~ a ligand binding domain; and

(c) further culturing the cells in a medium containing the first mitogen and a second mitogen,

wherein said second mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα, serum and combinations thereof, ~~and~~

wherein said medium containing the first mitogen and the second mitogen further comprises a *c-myc*-activating agent capable of binding to the ligand-binding domain, and

wherein the neural precursor cells resist differentiation in media containing a mitogen.

Claim 32 (previously presented): The cell culture of claim 31, wherein the mammalian neural precursor cells are derived from a human.

Claim 33 (previously presented): The cell culture of claim 31, wherein the mammalian neural precursor cells are derived from pluripotent embryonic stem cells.

Claim 34 (previously presented): The cell culture of claim 31, wherein the cells maintain a multipotential capacity to differentiate into neurons and glia.

Claim 35 (previously presented): The cell culture of claim 31, wherein the cells maintain a bipotential capacity to differentiate into neurons and astrocytes.

Claim 36 - 38 (canceled)

Claim 39 (previously presented): The cell culture of Claim 31, wherein the culture includes a monolayer component.

Claim 40 (previously presented): The cell culture of claim 31, wherein the second mitogen is different from the first mitogen.

Claim 41 (previously presented): The cell culture of claim 31, wherein the neural precursor cells are derived from central nervous system tissue.

Claim 42 (currently amended): The cell culture of claim 41, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, ~~diencephalon, mesencephalon,~~ hindbrain, and spinal cord

Claim 43 (previously presented): The cell culture of claim 31, wherein the nuclear receptor is selected from the group of receptors consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 44 (currently amended): The cell culture of Claim 6, which includes a clonal cell ~~culture~~line.

Claim 45 (canceled):

Claim 46 (currently amended): The cell culture of Claim 23, which includes a clonal cell ~~culture~~line.

Claim 47 (canceled):

Claim 48 (previously presented): The cell culture of Claim 23, wherein the recombinant DNA construct includes a *c-myc* DNA fused with at least one element comprising DNA for a ligand binding domain of a nuclear receptor.

Claim 49 (previously presented): The cell culture of Claim 48, wherein the nuclear receptor is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 50 (currently amended): The cell culture of claim 23, wherein the neural precursor cells are derived from central nervous system tissue selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, ~~diencephalon, mesencephalon,~~ hindbrain, and spinal cord.

Claim 51 (currently amended): A method for producing a culture comprising a mammalian neural precursor cell line wherein ~~at least about 20%~~ a portion of the cell line is capable of differentiating into neurons, comprising:

a) preparing a culture comprising at least one neural precursor cell in a medium including a first mitogen selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

b) introducing into the neural precursor cell in the medium including the first mitogen a recombinant DNA construct comprising a receptor ligand-regulated *c-myc* gene, wherein ~~at least a portion of~~ the *c-myc* DNA is fused with DNA encoding ~~at least a portion of~~ a ligand-binding domain of a nuclear receptor; and

c) ~~culturing~~ expanding the neural precursor cell including the *c-myc* construct in a medium containing the first mitogen and a second mitogen into a cell line that resists differentiation in media containing a mitogen,

wherein said second mitogen is selected from the group consisting of aFGF, bFGF, EGF, TGFα, serum and combinations thereof, and

wherein said medium containing the first mitogen and the second mitogen further comprises a *c-myc*-activating agent capable of binding to the ligand-binding domain.

Claim 52 (previously presented): The method of Claim 51, wherein the neural precursor cell is derived from a human.

Claim 53 (canceled):

Claim 54 (previously presented): The method of claim 51, wherein the neural precursor cell is derived from pluripotent embryonic stem cells.

Claim 55 (previously presented): The method of claim 51, wherein the neural precursor cell is derived from central nervous system tissue.

Claim 56 (currently amended): The method of claim 51, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, ~~diencephalon, mesencephalon,~~ hindbrain, and spinal cord.

Claim 57 (canceled):

Claim 58 (previously presented): The method of claim 51, wherein the second mitogen is different from the first mitogen.

Claim 59 (previously presented): The method of claim 51, wherein the nuclear receptor is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor.

Claim 60 (previously presented): The method of claim 51, wherein the *c-myc*-activating agent is selected from the group consisting of β-estradiol, RU38486, dexamethasone, thyroid hormones, retinoids, and ecdysone.

Claim 61 (previously presented): The method of Claim 51, further comprising introducing a selectable marker into the neural precursor cell.

Claim 62 (currently amended): The method of Claim 51, further comprising culturing the neural precursor cell in the presence of ~~unmodified~~ feeder cells.

Claim 63 (currently amended): The method of Claim 62, wherein the ~~unmodified~~ feeder cells are selected from the group consisting of unmodified primary stem cells, immature glial cells, mature astrocytes, fibroblasts, neurons and mitotically-inhibited cells.

Claim 64 (currently amended): A method of obtaining a culture comprising a neural precursor cell line of a mammal capable of expanding through at least thirty cell doublings and wherein ~~at least about 20%~~ a portion of the cell line is capable of differentiating into neurons comprising:

a) preparing a culture comprising at least one neural precursor cell, wherein said culture includes a first mitogen selected from the group consisting of aFGF, bFGF, EGF, TGFα and combinations thereof;

b) modifying said neural precursor cell to express a chimeric *c-myc* protein comprising a *c-myc* protein fused with at least one nuclear receptor protein such that the modified cell resists differentiation in a medium containing a mitogen; and

c) culturing the undifferentiated modified neural precursor cells in a medium comprising the first mitogen and a myc-activating agent.

Claim 65 (canceled)

Claim 66 (previously presented): The method of claim 64, wherein the neural precursor cell is derived from central nervous system tissue.

Claim 67 (currently amended): The method of claim 66, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, ~~diencephalon, mesencephalon,~~ hindbrain, and spinal cord.

Claim 68 (canceled):

Claim 69 (previously presented): The method of Claim 64, wherein the nuclear receptor protein is selected from the group consisting of an estrogen receptor, an androgen receptor, a progesterone receptor, a glucocorticoid receptor, a thyroid hormone receptor, a retinoid receptor, and an ecdysone receptor

Claim 70 (previously presented): The method of Claim 64, wherein the myc-activating agent is selected from the group consisting of β-estradiol, RU38486, dexamethasone, thyroid hormones, retinoids, and ecdysone.

Claim 71 (previously presented): The method of Claim 64, which includes withdrawing the first mitogen and the myc-activating agent to initiate differentiation of the expanded culture of neural precursor cells.

Claim 72 (currently amended): A cell culture comprising:

at least one neural precursor cell of a mammal, wherein said cell:

(a) is transfected with a ~~proto-oncogene~~c-myc DNA;

(b) ~~maintains the multipotential capacity to differentiate into a neuron or glia~~ resists differentiation through at least thirty cell doublings of said cell when grown in medium containing a mitogen; and

(c) differentiates into a neuron or glia upon withdrawal of a mitogen.

Claim 73 (currently amended): The cell culture of Claim 72, which includes a clonal cell ~~culture~~line.

Claim 74 (previously presented): The cell culture of Claim 72, wherein the neural precursor cell is a neural stem cell.

Claim 75 (previously presented): The cell culture of claim 72, wherein the cell is derived from central nervous system tissue.

Claim 76 (currently amended): The neural precursor cell culture of claim 75, wherein the central nervous system tissue is selected from the group consisting of hippocampus, cerebral cortex, striatum, septum, ~~diencephalon, mesencephalon,~~ hindbrain, and spinal cord

Claim 77 (previously presented): The cell culture of Claim 72, wherein the proto-oncogene includes at least a portion of *c-myc*.

Claim 78 – 80 (canceled):